WHIRRAKEE

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MONTHLY NEWSLETTER OF THE BENDIGO FIELD NATURALISTS CLUB

Bendigo Field Naturalists Club Inc.
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Membership of the Bendigo Field Naturalists Club is open to all those interested in Natural History. The subscription rates are: Single $40; Family $50; Concession: Single $35; Family $40. *Whirrakee* subscription only is $40.

General meetings are held on the second Wednesday of each month. The venue for General meetings is the Golden Square Senior Citizens Building, Old High Street, Golden Square. The meeting starts with a 10 minute thing-of-the night natural history segment. The invited speaker starts at 8:00pm and meetings conclude with supper. The Annual Meeting is held in September.

Committee meetings are held on the third Wednesday of each month at 5:30pm. Members of the Committee are the Office Bearer listed above and the following members: Anne Bridley, Kerrie Norris, John Lindner, Jenny Shield, Diana Collier, Devi Shanty

Excursions are conducted regularly and are advertised on the diary page of the *Whirrakee*. The assembly point for excursions is the Golden Square Senior Citizens Building, unless otherwise specified. Several interclub field naturalist campouts are held every year.

The Bendigo Field Naturalists Club is actively involved in local conservation issues. An **indigenous garden** has been established around the Golden Square Senior Citizens Building. Working bees are advertised on the *Whirrakee* diary page.

Bird Observing: Club members conduct regular bird surveys. Please contact Anne Bridley 5442 6188 or Glenise Moors 5439 6254 for details. Special bird observations should be reported to Anne Bridley 5442 6188. To propose bird observing excursions please contact Kerrie Norris 5447 8017.

Front cover photo?...see page 2

WHIRRAKEE

Monthly Newsletter of the Bendigo Field Naturalist Club

Vol. 34, No. 10, November 2013

Whirrakee takes its name from the Whirrakee Wattle (*Acacia williamsonii*), which is virtually endemic to the Bendigo region

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Authors are responsible for the accuracy of the information they use and also for any opinions expressed in their articles. Contributions should be posted or e-mailed to the editor at least two days prior to the last Wednesday of the month. They will be included as soon as possible after they are received, although space restrictions occasionally require shortening of articles or holding them over till the following edition of *Whirrakee*.

Articles in *Whirrakee* may be reproduced, but permission should be obtained from the Bendigo Field Naturalists Club, and acknowledgment should be given to the author and the Club. Some back issues are still available on request.

Editor's Note

Spring is continuing to amaze us. Some flowering sites are better than ever. The university bushland, which started off quite poorly early in the season but then became beautiful after all, has finger flowers and blue pincushions like I have never seen. And then… , when you have seen it all around Bendigo, you go to a nearby place where it's a bit colder and see it all over again. We are very lucky indeed. Please keep an eye on the burnt bushland around Bendigo and report how this is developing in the next year or two.

Front page photographer: Joy Clusker

This image is of a female mouse spider *Missulena occatoria*. The spider was found on the crater of Mt Franklin last Thursday 24th October. The female is black all over, but the male of this species is quite colourful, with a red head and jaws and a strikingly blue abdomen. The website of the Australian Museum has a lot of interesting information about this group of spiders, including how to tell them apart from funnel web spiders.

Check it out at: http://australianmuseum.net.au/Mouse-Spiders/

Short Notices

Some members still need to renew their membership for 2013/2014, so below are the (new) fees once again:

Membership Fees for 2013 – 2014

Single membership	$40
Family membership	$50
Single concession	$35
Family concession	$40
Subscriptions	$40

A renewal slip was included with your August *Whirrakee*. Please pay promptly if you have not already done so.

Email Notifications

If you wish to be advised promptly of interes-ting sightings, events or other special commu-nications you can subscribe to our club's email notifications service. Subscribers to the service who make an unusual or interesting sighting in our region can email all other members of the service.

Email **subscribe** in the subject line to info@bendigofnc.com.au if you wish to join the service. Include your full name in the body of the email.

To be added to the list you must first send an email to the address provided. This is the easiest way to manage the system.

Help with moth identification

In a post on Geoff Park's 'Natural Newstead', Chris Johnston from Green Gully mentioned the existence of a fantastic website that might help you identify that interesting moth on your window! - **Australian Moths On-line** - http://www1.ala.org.au/gallery2/main.php - Chris commented that it was a bit difficult for moth ID beginners, but it's a visual feast nevertheless.

Willing to help with a new publication?

The committee is requesting expressions of interest from members who want to assist with the production of a new BFNC publication. Anybody interested can email their details and ask for more information about the project on info@bendigofnc.com.au

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Bowerbird – sharing observations and networking on interesting projects

At the last general meeting, Richard Goonan introduced the 'Bowerbird' web site as something all members can get involved in. The site features many interesting projects to which people can contribute, or just check out for information and pleasure. Richard has set up a project for the Bendigo Field Naturalists Club Community, so there is already some local information that we can share in and contribute to, but naturally members are not confined to the Bendigo project,

The 'Bowerbird' site is part of a bigger website called: *PaDIL – High quality images and information tools designed for Biosecurity and Biodiversity*. It can be accessed at: http://www.padil.gov.au/

Once there, click on the **Bowerbird** tab. You can simply join 'Bowerbird' and have a look around at all the great projects (including the Bendigo Field Naturalists Club project) but you might also find yourself contributing before long. Have a look and tell us what you think.

Note on colour images, pages 4-7

It has been brought to my attention that the new way of posting the *Whirrakee* will put a crease right in the middle of our colour photos, so I am trying a different way to place the photos on the page. Hopefully this will keep some of the photos unblemished.(ed.)

Spring Orchids in gorgeous colours

Photographer: Joy Clusker

When Blue and Yellow don't make Green
These three Sun Orchids were found on Wildflower Drive on the last Field nats excursion. The Blue Sun Orchid, *Thelymitra megacalyptra* and Rabbit Ears, *Thelymitra antennifera* (above) can produce the Crimson Sun Orchid, *Thelymitra X macmillanii* (below left) when crossed; this is not what happens with paint.

Below right: Tiger Orchids, *Diuris sulphurea* from Porcupine Ridge Track (Castlemaine Diggings Heritage Park) 27th October (Photographer: Bruce Johnson)

Pterostylis plumosa, Bearded Greenhood
(at Mandurang, photographer: Dale Little)

Ophrys fuciflora, late spider orchid
(in Les Eyzies France, photo by Dale Little)

An Orchid Odyssey by Dale Little. Here (above and below left), Dale has strayed from her usual backyard observations… see article on page 8. The delicate orchid below (left) is the Dragon Orchid, *Caladenia barbarossa*. The one on the left is a Flying Duck Orchid, *Caleana major*, from Castlemaine Diggings Heritage Park (photographed on October 27 by Sabine Wilkens)

Pultenaea pedunculata, Matted Bush Pea. I have seen small patches of these, but never such extensive mats.

Peas from the Castlemaine Diggings Heritage Park (27th October). I am only guessing their identity, so will happily accept corrections. The whole bush on either side of Porcupine Ridge Track was alight with them and many others.... (Photographers: B.Johnson and S.Wilkens)

Dillwynia sericea, Showy Parrot Pea

Gompholobium sp.?

The inner workings of a *Correa reflexa*…
Photographer: Gemma Smith (using the MacroPhot set-up in the Electron Microscope Laboratory at Latrobe University)

This unusual plant was identified by Jenny Shield as as *Styphelia adscendens,* Golden Heath (Family Ericaceae). Photographed in the Grampians in early Spring.

…and below: how does a daisy 'flower' work? Again, Gemma Smith has used the Macrophot set-up to show, in detail, the tubular, blue/purple-petalled flowers that serve in reproduction, and the ligulate (single white petalled) flowers that serve in advertising. Both types of flowers make up the head (inflorescence) of a daisy. It's a great way of dividing up the work a flower has to do. Perhaps this innovative method of attracting pollinators is at least partly responsible for the daisy family being the most successful in the world (in terms of species number).

Orchid Odyssey
by Dale Little – October 2013

This year Peter and I have had the privilege of experiencing Spring in three locations - in France, the South West of Western Australia and of course, in our local area. We have enjoyed the varied displays of wildflowers seen in each area but were particularly interested in seeking out and photographing ground orchids.

In France, discovering orchids took second place to viewing the many galleries, chateaus and cathedrals and other places of interest. However keen eyes spotted a number of species as we walked in different areas. What most surprised us about many of the orchids we saw, was how many flowers were on some of the stems of the species we found. We counted over 100 flowers on one stem found on the outskirts of Rocamador. However our favourite was the delicate slipper orchid (*Ophrys fuciflora*), found along a pathway at Les Eyzies (see page 5).

During our travels in South West Western Australia we had a feast of orchids. We were excited when we found numerous species on our rambles through various forests, reserves and national parks, and also when we were directed to specific areas by local experts, or taken on guided tours. The tour in the Stirling Ranges was really special. The day before we had found 16 species on our own but on the tour we were shown 28 species, some of them very rare and endangered. Coastal areas near Margaret River and Albany, tall forest areas around Pemberton, were places that yielded many finds including the fragile zebra orchid (*Caladenia cairnsiana*). At the Wild Flower Show in Kojonup, we were able to view some additional species to those "seen in the wild". Our special find, near Kojonup, was a rare albino dragon orchid (*Caladenia barbarossa*), see page 5.

(Before going to W.A., we purchased a macro lens and found it just wonderful for taking photographs, especially very close up pictures of the orchids and other plants we saw. We have some beautiful photographs.)

Time in our local bushland haunts has been somewhat limited this year, but we have still found several varieties of orchid - a number of *Pterostylis* species including the spectacular bearded greenhood (*Pterostylis plumosa*) at Mandurang (see page 5), wax lipped orchids, purple beard orchids and, to date, the promise of sun and duck orchids to come. There were also some lovely stands of both salmon sun orchids and pink caladenias at Heathcote (Is this considered part of the Bendigo bushland?).

Currently we are going through the process of identifying many of the orchids we saw - not an easy task as there is a lot of variation within a single species and also many hybrids, especially amongst the W.A. orchids. We have been very grateful to the orchid enthusiasts we met along the way who offered advice on identifying orchids in a particular area. The European orchids are especially tricky. but we are working on this.

A special October observation
May be you have seen this bird too; Lance Costin reported a pink (all over) butcherbird. I am unsure of the location, so if interested in this sighting, please ring Lance on 5446 7590.

Kangaroo management from Melbourne to the Mallee – September general meeting
Speaker: Ass. Prof. Graeme Coulson

Graeme Coulson, who is freshly retired from the Department of Zoology at the University of Melbourne still works a lot.
He studied Grey Kangaroos for his PhD, but has since then worked with many other animal groups like lizards, gulls, bats, potaroos, bandicoots etc. His general interest is in the ecology of herbivores, and for this talk was focusing on the management of kangaroos.

Graeme began by explaining the difference between the Western Grey and the Eastern Grey Kangaroo and where the two species meet. In fact, the populations of Western Greys begins just west of Bridgewater and both species can be found in that region.
Kangaroos live in groups the 'membership' of which is open. New members can join and anyone can leave unhindered, so there are often seemingly random comings and goings. However, the size of the group is probably far from random. The concept that many eyes detect predators more easily is borne out in some of Graeme's observations, where he compared the size of a kangaroo group with available foraging time of individuals. It turns out that as the size of the group goes up, the time individuals spent foraging goes up too – rapidly at first and then more slowly. Conversely, as the size of the group goes up the degree of vigilance of each group member goes down.
Presumably a certain group size represents the optimum size for a particular environment. What exactly this size is depends on the availability of food, shelter and other variables. Groups tend to be bigger in open country and smaller in forested, more sheltered environments.
So the group sizes we observe are far from random and probably involve a constant assessing of the risks and benefits, and adjusting the group size accordingly. Mixed groups of Eastern and Western Greys, in places where the two species overlap, also occur, and it seems that this is also taken into consideration when assessing and adjusting optimal group size. Quite surprisingly, from Graeme's observations, it seems that the individual kangaroos in a group feed slightly better when in a mixed groups.

Kangaroos carry many parasites, especially nematodes, in their digestive tract. It is uncertain what levels of such parasites are normal and if high nematode loads actually negatively influence kangaroos. Infestations re-occur via the faecal-oral route, so the danger of re-infection is always greater if animals are feeding near where their faecal pellets have been deposited. If parasites are acquired via this route and if they are detrimental to the animal, one would think that they would avoid feeding near pellets (faecal aversion) if they had the chance.
Trying to get an answer if they do or don't avoid their faecal pellets during feeing, Graeme and his students removed faecal pellets from some quadrats in a certain area and placed them on other quadrats in the same site, leaving two types of squares (on a kind of random chequerboard), some with no pellets and some with twice the pellet load. Observations of kanagroo feeding showed that they much preferred the sites without faecal pellets, thus actively avoided the pellet areas in their feeding arena. This was also found in another experiment where they could not see the pellets (as they were hidden in tall grass). So detection and avoidance of faecal pellets could occur via visual or olfactory clues, but these experiments did not answer the questions about 'normal' parasite loads of kangaroos.

Much of current kangaroo management involves culling. This is because overpopulation of kangaroos in confined areas will decimate the vegetation and cause much suffering among the starving animals. In the Murray-Sunset NP, culling has occurred since 1990. Graeme studied kangaroo behaviour in response to this culling and witnessed a mass dying of kangaroos in the heat wave of last summer. This heat wave lowered the population in the Murray-Sunset NP to such an extent, that culling has not resumed there since.

At Portland, a culling program was started in conjunction with a fertility control program in the early 1990s. A hormone implant gave good birth control for about 3 years, but then became less and less effective. This same implant is still used, but the dose is now higher and control is maintained for much longer.
Near the aluminium smelter at Portland, a high degree of fluorosis was found in dead kangaroos, and it turned out that the grassy buffer zone, which was maintained by the

smelter, was grazed by kangaroos. These animals, when ingesting the grass (and they would have only eaten grass from that place), would have also consumed precipitated fluorine that had formed from the emissions of the plant. Fenced buffer zones are now keeping the kangaroos from this food source.

In another location (Serendip Sanctuary) populations of kangaroos exploded – and then cashed when the lack of rain failed to provide green food. Kangaroos in that area suffered from low fecundity and low fat around the kidney (an indicator of nutritional well-being) and lumpy jaw, a nasty disease of the jaw that must make feeding excruciatingly painful. The obviously intense suffering shows the importance of culling in such areas.

Kangaroos can also live with people and most of the time this situation needs active management. In Anglesea, hundreds of kangaroos inhabit the golf course. After the breeding season is over, males disperse all over town, while most female stay on the golf course. Many more males are killed on the roads as a result . Graeme and his students placed collars on the kangaroos and named each one in such a way, that the name could be read from a distance. This sort of practice of 'personalising' animals may be frowned upon by some quarters, but it actively encourages 'citizen science'. All sorts of people reported the whereabouts of the kangaroos as they could read their names form a distance and everybody in the town got involved including the radio station and other public bodies. Much information was gained on their movements through Anglesea and the town's people felt some sort of ownership of their kangaroos. This was a good example where people and share a space with wild animals and how this can be actively managed to be a win-win situation.

This was an amazing talk, spanning a 30 year career in kangaroo observation and management. There were many questions when the lights came back on, which demonstrated the interest in the topic. Thank you to Graeme who came a long way to enlighten us.

Call for help with field work

Effects of host-plant quality on the trophic structure of insect communities

Renae Forbes
La Trobe University, Bundoora, VIC, 3086

A number of forces such as host-plant quality influence the abundance and diversity of insect species within an ecosystem. Although ecologists have investigated the functional role of host-plant quality in insect communities, they have primarily employed a manipulative approach and so the importance of natural variation in plant quality is poorly understood. My project aims to determine the influence of:

(1) Spatial variation in edaphic and plant factors on the insect diversity of two native Australian shrubs, Gorse Bitter Pea (*Daviesia ulicifolia*) and Drooping Cassinia (*Cassinia arcuata*)
(2) Host-plant quality on the abundance of insects within related taxa

This study has important implications for the revegetation of degraded ecosystems and the potential of plant species to support native insects.

Field work will be conducted within a number of Trust for Nature covenants (between 10-12 sites), around the Bendigo-Seymour region from October to January. I am looking for some individuals to assist with the collection of leaf, soil and insect samples throughout this time. Leaves will simply be collected using scissors and stored in bags for nutrient content analysis and core soil samples will be taken using a stainless steel soil probe. Insect abundance and diversity will be assessed using either sweep-netting or insecticide spraying. Other measures to be taken include plant size and leaf weight.

No prior experience is required and it is up to the individual how much time they can invest and how often.

If you are interested in helping Renae, please indicate your availability to the BFNC email address at: info@bendigofnc.com.au
Ben Goonan will then get back to Renae with a coordinated response.

Diary

All Club meetings are held at the Golden Square Senior Citizens Building, Old High St Golden Square, unless otherwise indicated.

Wednesday November 13 7.30pm
This month we will have our very own Rod and Jan Orr talking about their trip to South Africa & Namibia.

Wednesday December 11 6.30pm
For the December meeting, we usually share a meal (hence the earlier starting time). Everyone is welcome to contribute something. Please also bring your own good cheer, drinks and utensils.

Family Nature Club
Sunday 17th November. The activity will most likely be a walk up Mt Herbert (or better known as Big Hill). Details were still being finalised by the time of printing, so please check with the organisers.
Registration:
Bendigonatureclub@gmail.com or 5443-1326
Check out their 2011 and 2012 activities at http://bendigofamilynatureclub.blogspot.com/

Bendigo Native Plant Group meeting.
All interested people are welcome to come along. Meeting starts at 7:30pm on the third Tuesday of the month, Golden Square Senior Citizens Hall.
Next meeting: 19th of November.

Wildlife Rescue & Information Network Inc.
W.R.I.N. is an organisation dedicated to the care of orphaned, sick or injured native animals. It is fully endorsed by the Dept of Sustainability and Environment.
Please call our Emergency Number for Help for Fauna in Need. Phone: 0419 356433.

Vegecareian Festival, 2nd November, held at Bendigo is based on the theme of Caring for your Health and Caring for Animals.
The Great Stupa Bendigo, 25 Sandhurst Town Road, Bendigo, Victoria 3550

Melbourne's Monthly Flying Fox Count
At Yarra Bend Park, the bat count is held once a month at dusk when the whole colony of 10,000 -20,000 bats fly out to feed around Melbourne's suburbs. New counters are very welcome... 13 Nov 2012 7:45pm-8:45pm and 11 Dec 2013 8:15pm-9:15pm
Booking required. Contact Dr Rodney van der Ree on 0412 562429 or rvdr@unimelb.edu.au

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planning for your autumn excursions...?
Wombat Forest and Macedon Ranges Fungi Guide
The Wombat Forest is a hotspot for the diversity of fungi. Hundreds of species have been documented from the familiar mushroom to the more bizarre forms of those shaped like corals, cups, clubs, jellies, lattice balls and even starfish!

Wombat Forestcare is promoting the importance of this group of organisms through a new guide – 'Fungi of the Wombat Forest and Macedon Ranges'. The guide has colour photographs of 108 of the more familiar local species as well as information about identification.

To obtain a copy of the guide either send a cheque for $6.60 to Wombat Forestcare, 715 Little Hampton Road, Glenlyon, 3461 or pay this amount into our bank account Wombat Forestcare Inc, Bendigo Bank, Account no 149488678, BSB 633 108 and email info@wombatforestcare.org.au to say you have done this. Please do not forget to include your postal details.

VNPA "Caught on Camera" Project
The VNPA have released a free download of a Mammal Guide to the Wombat Forest, based on the motion camera images from the project carried out in the Wombat Forest.
Go to: http://www.wombatforestcare.org.au/ and download the guide.